

LUKE AFB TALKING PAPER
on
COMPATIBLE SITING OF RENEWABLE ENERGY INFRASTRUCTURE

Military installations conduct flight training operations in thousands of square miles of special use airspace in Arizona. Renewable energy infrastructure can negatively impact these training operations in a number of ways including, but not limited to:

- Wind turbines cause radar interference to ground and airborne radar systems, interfering with or preventing safe and effective terminal radar control, or airborne training operations.
- Vertical structures cause a flight hazard if located in or beneath low altitude military airspace.
- Evaporative ponds can attract birds beneath low altitude airspace and cause a flight hazard.
- Transmission infrastructure can create electromagnetic interference to military test operations.

Department of Defense policy calls for the increased use of renewable energy sources for military installations, and even promotes the development of energy infrastructure on DoD installations as an energy source and/or a cost offset measure. DoD is conducting studies and developing official policy regarding renewable energy needs and the mitigation of impact to the mission. In the interim, individual installations are monitoring all aspects of the industry to best leverage the benefits, and mitigate the impacts to the local and regional military mission.

It is important for military considerations to be examined early in the siting determination process, before the outlay of significant resources for a project. However, there is no single federal or state office that oversees renewable energy and transmission planning, and it is difficult to determine where industry wants to install energy plants and transmission lines.

To stay informed, Luke AFB interacts with numerous agencies and entities to monitor developments in the state:

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| - Bureau of Land Management | - Arizona Game & Fish Department |
| - Arizona State Trust Lands Department | - U.S Fish and Wildlife Service |
| - Arizona Tribes | - Arizona Wind Working Group |
| - Private industry | - APS and SRP |
| - Federal Aviation Administration | |

Luke AFB acts as the primary military point of contact to the DoD Southwest Renewable Energy Working Group, to monitor and facilitate standardized response to industry on potential impact of renewable energy plants to the military mission.

To help in planning, a map has been developed to identify the location of all Arizona low altitude military airspace, showing where vertical development may impact training.

The growing renewable energy industry is expected to continue to present challenges to future military mission requirements. While individual projects can be mitigated to a certain extent, the cumulative impact of wind turbines and vertical infrastructure to the military mission is unknown.

RECOMMENDATIONS:

- Establish a dedicated state office to manage all requests for renewable energy infrastructure.
- Establish a GIS database and webpage of relevant data, including airspace and military interests, to facilitate location planning.
- Implement long-term planning for sustainable solution to mitigate impact of this industry to the myriad interests of Arizona's constituents.